

7. The Distributive Forces and (Digital) Capitalism: Some Clarifications

We have now fully set out the theoretical essence of the term ‘distributive forces.’ In a first step, we tackled another blind spot in the debate about (digital) capitalism (see Chapter 5): namely, that central mechanisms of capitalism have led to a situation in which the optimisation of the productive forces geared towards value-generation has long ceased to be sufficient to preserve this mode of production. The permanent expansion of the market and of consumption has become and is becoming increasingly vital. This is not only crucial for a business’s self-assertion in the face of the competition, but also decisive for how successfully it will manage, and emerge from, crisis. Means of communication and digitalisation play an important part in this.

In a second step, we investigated the link between the *distributive forces and (digital) capitalism* (see Chapter 6) and theoretically and analytically substantiated and empirically illustrated what is new about each of the three central distributive forces (advertising and marketing, transport and logistics, and control and prediction). Before we use this freshly polished analytical lens to consider current empirical phenomena of digital capitalism (Chapter 8), a few points need clarifying.

To start off, and for the sake of completeness, what follows—and this is directed in particular to those more familiar with Marx—are some conceptual clarifications and distinctions that have not yet been addressed (Chapter 7.1). Next—although already hinted at in various instances—we will seek to understand in more detail what the implications are in terms of transformation and development: are the productive forces becoming obsolete and being replaced by the distributive forces both conceptually and in reality—or, as Silicon Valley jargon would have it, *disrupted*? This question will be answered in theoretical terms—proceeding through the phenomena of the digital distributive forces, which can be roughly periodised from the 1980s until today (Chapter 7.2). Finally, we will bring together the development of the productive forces and of the distributive forces, conceiving these as both belonging to a single process, and discuss the research questions that emerge as a result (Chapter 7.3).

Those who have read enough about theory at this point are free to continue directly with Chapter 8, which is more strongly focused on empirical aspects. The essential conceptual and theoretical groundwork for an understanding of (digital) capitalism was in fact laid out in the two chapters on the distributive forces (Chapters 5 and 6). Others with more time (and who could say they do?), who enjoy delving into painstaking analysis (who on earth would?) and who show an interest in the resulting forward-looking and theoretically deduced research questions (there go the last remaining readers)—are encouraged to continue reading the below.

7.1 Distinction: relations of distribution versus circulation

Whatever one may think of Karl Marx and his analyses—even from a critical perspective—one thing does seem indisputable: the impressive depth, breath and predictive capacity of his theories. He was capable of great complexity and abstraction in his thinking, allowing him the utmost precision in the elaboration and use of his concepts. Those who seek to use his remarkable theoretical toolkit for their own interpretations should thus at least attempt to use it creatively but not haphazardly, not submissively but respectfully.

In this sense, in my analysis presented here, I consider essential two conceptual clarifications, or distinctions, concerning my neologism ‘distributive forces’. The first pertains to the ‘relations of distribution’, as the root word alone would suggest, and the second to ‘circulation’, the actual substance of which makes it compelling for our context. For this purpose, we will once again delve into the theoretical deliberations of Karl Marx. To all those who want to spare themselves this effort (spoiler alert!): both concepts are important, and both are closely linked to the distributive forces. And the engagement with both has reinforced my decision to use the analytical term ‘distributive forces’ and to maintain my assertion that this represents a fruitful approach for understanding digital capitalism.

We have already dealt extensively with the dynamic that inevitably leads to overproduction and market expansion in capitalism (see Chapter 5.1) and, proceeding from Marx, argued that the creation of value is determined by the social productive power and the realisation of value by society’s consuming power (see Chapter 5.2). Those familiar with Marx may have noticed that there is one Marxian term that has not yet been used (although we have certainly already dealt with its substance): the *relations* of distribution.

They have an influence on the (greater or smaller) extent to which the masses are granted consumption (see Marx 1998: 243). When Marx speaks of distribution in this context, he is referring primarily to the relations of distribution of the realised surplus value (i.e. between profit and wages, or capital and labour). The

term *distributive forces* that I have introduced here, by contrast, seeks to capture the quantitative growth and the qualitative increase in significance of the *efforts* (including spending) towards the realisation of surplus value, which develop an even stronger society-transforming character in the course of current digitalisation.

Of course, Marx often speaks of productive forces and relations of production (as presented above: see Chapter 4), yet hardly of the *relations* of distribution. And he has good reason not to do so: for him, “the so-called relations of distribution are themselves relations of production” (Marx 1986: 90), i.e. both are ultimately the same, distinguished only by the chosen vantage point, because “the relations of distribution are themselves produced by the relations of production” (Marx 1987: 142), and this applies “not only with regard to the object [...], but also with regard to the form” (Marx 1986: 32–33). Marx places some emphasis on this aspect, at times in disputes with other economists, such as that with John Stuart Mill (see Marx 1988: 150), or when he speaks of the “nonsense [...] to regard bourgeois relations of production and of distribution as different in kind.” (Marx 1988: 159)

Despite Marx’s repeatedly reiterated equation of the two relations, Volume Three of *Capital* contains a chapter, albeit a fragmented and short one, whose very title refers to the relations of distribution. Here, Marx discusses the question of how the realised surplus value is distributed among the distinct sources of income—“wages, profit and ground rent”—of “the three big classes”, namely “[t]he owners merely of labour-power, owners of capital and landowners”. Furthermore, he notes (and thus essentially anticipates the idea that underlies later attempts at stratification models) that “[m]iddle and intermediate strata even here obliterate lines of demarcation everywhere” (Marx 1998: 870). The total volume of goods produced—i.e. “[t]he new value added by the annual newly added labour [...] is thus split into three parts, which assume three different forms of revenue [...] These, then, are relations, or forms of distribution, for they express the relations under which the newly produced total value is distributed among the owners of the various production agents.” (ibid.: 863) This basically sums up Marx’s deliberations on the matter. Shortly after this section—as Friedrich Engels, the editor of the volume, remarks—the manuscript “breaks off” (ibid.: 871).¹

The distribution of resources—but also of opportunities, participation, decision-making power, or risks—represents a more general problem which each and every human group or society and economic model must solve in one way

1 According to Friedrich Engels, “the seventh part”, which contains this chapter on the relations of distribution, was “available complete, but only as a first draft, whose endlessly involved periods had first to be dissected to be made printable. There exists only the beginning of the final chapter.” (Engels 1998: 10) In sum, as Engels informs the reader at some length in his introduction to the third volume of *Capital*, he had to invest a lot of work to create a coherent whole from Marx’s unfinished manuscripts (ibid.: 5–23).

or another. Hence, the relations of distribution do not pertain only to the division or allocation of resources between capital and labour in capitalism or to those between the now-proverbial *1 per cent* and *99 per cent*.² From a national economic perspective, the distribution ratios between different sectors, industries or regional clusters are also interesting, while social structural analysis allows us to examine the distribution ratios between distinct social groups with certain socio-economic characters (such as gender, ethnicity, level of education etc.).

Even looking at pre-capitalist times, the question of which groups in society or which individuals within a group are entitled to what kind of rights and duties—and allowed access to which resources on the basis of which criteria and selection and allocation processes—is often, on closer examination, the very aspect that culturally distinguishes one community, or an epoch, from another. Capitalism and modernity have—at least in terms of discourse—proclaimed the market and performance as central distribution mechanisms. Neither is neutral or free of path dependencies, let alone fair and just. Not even the proponents of the free market and performance ideology dispute this. And we could certainly say a lot more on this issue, but it is not our subject here. Without taking into account the relations of production and distribution,³ it is difficult to envisage the distributive forces as part of the productive forces. And yet, this context is not the core aspect of our analysis but serves merely as a framework and illustration of preconditions.

Seeing as the unequally distributed power of consumption represents a particularly relevant aspect for our analysis, we should mention an empirical indicator that illustrates what Marx means when referring to the relations of distribution: the ratio between the income of unskilled workers and that of CEOs, and the question of whether this is regarded as fair or not.⁴

2 The trademark slogan 'we are the 99 %' accompanied the activities of the Occupy movement. Historical anthropologist and activist David Graeber, who passed away in 2020, is regarded as the co-inventor of this slogan, but describes how the idea was born out of a collective process (see Cain 2020). The slogan went viral in August 2011 via a Tumblr blog post that called on readers to show the 1 per cent something of the 99 per cent's lives, by writing something about their own circumstances on a sign or piece of paper and uploading a selfie of them holding it: "Let the 1 percent know by taking part in the 99 Percent Project. Make a sign. Write your circumstance at the top, no longer than a single sentence. [...] Then, take a picture of yourself holding the sign and submit it to us" (Grim/no name 2011). A well-known left-wing US journal later revealed who had initiated the blog post based on the slogan: two young activists from New York City (Weinstein 2011).

3 The relations of production in turn comprise numerous relations that can manifest themselves in varying forms in distinct capitalist societies too: this includes, for example, the relations of ownership and domination, but also the relations of circulation and consumption (of capital and commodities).

4 For some time now, consumption expenditure has been considered a more precise indicator than income for measuring social inequality (see, on the current state of the debate, Hörstermann 2016: 183–184). This applies in particular when certain goods that are a precondition for any so-

In a study based on data from 40 countries collected in the context of the *International Social Survey Programme* (ISSP 2012), respondents were asked to estimate how much CEOs and (unskilled) assembly line workers each earned, and to then indicate how much they thought that each should earn. Findings suggest that there is, by and large, an almost identical cross-cultural and cross-national understanding of what is fair, or 'ideal', namely an income ratio of 4.6 (CEO) to 1 (unskilled worker) (Kiatpongsan/Norton 2014: 588–591). The respondents' estimate of that ratio was almost double, at 10 to 1. The ideal and the estimated ratio are so far below the actual figures that the authors of the study had a hard time illustrating it in the same chart: in Germany, for example, the ideal of 6.3 to 1 is met with a real ratio of 147 to 1; in the US, the ideal is similar, at 6.7 to 1, whereas the actual ratio of 354 to 1 reveals an even greater discrepancy (see *ibid.*).

Only when translating these ratios into actual amounts, as another study has recently done using data from 2012 (Gavett 2014), do we get an idea of the respective potential power of consumption at the individual level: the average annual remuneration of CEOs in Germany is \$5.9 million, and that of average workers is \$40,223. If the real world were to correspond to the respondents' ideal, the annual income of workers would instead have to be \$946,045 (for the US: \$12.26 million for CEOs per year versus \$34,645 for workers in reality, and ideally \$1.8 million).⁵

cial participation—such as food, clothing, but also computers/Internet or health—are no longer sufficiently available, at least temporarily, in circumstances of extreme poverty (Kus et al. 2017: 578–580). Jean Baudrillard (on his critical theory of consumption, see Chapter 5.2) already established this as early as the 1970s, albeit without specifying on which data he was drawing: "The difference in expenditure between workers and senior managers on essential goods is 100:135, but it is 100:245 on household equipment, 100:305 on transport and 100:390 on leisure. One should not see these figures as showing a quantitative graduation within a homogeneous space of consumption, but see, through them, the social discrimination attaching to the quality of goods sought after." (Baudrillard 1998: 58). So, the ratio between workers' and managers' spending levels varied between 1.35 and 3.90. Based on data from the Einkommens- und Verbrauchsstichproben (EVS) ('Income and Consumption Survey', published by Germany's Federal Statistical Office) for the year 2008, Irene Becker calculates the ratio of average spending on consumption in the case of material wealth divided by average spending in the case of material poverty, i.e. both extremes of the wealth spectrum. The ratio ranges from almost level (1.39 for food), to a markedly more pronounced one when it comes to equipment (5.98), transportation (5.68) and recreation (4.77) (Becker 2017: 17–18).

- 5 Of course, this study partially presents somewhat bold calculations that could be challenged on various details (gross or net? Are bonus payments included on one side, and pension entitlements on the other? Would this not have to be grouped according to industries?). However, some of the differences are so drastic that such details will have little material bearing on the relations of distribution (of which, we ought to keep in mind, we can only depict a certain aspect here, based on only one of several conceivable indicators). Incidentally, we could also imagine this in reverse, continuing to pay the unskilled worker in Germany only those \$40,223, but still attain the desired ideal through a reduction on the CEO side: \$253,405 annual income is what would be left. The

There are voices within international law studies departments who emphasise that socio-economic equality is not a human right; for example, Samuel Moyn notes that even the maximum conceivable unequal distribution, in which a single individual owns everything in the sense of an “absolute overlord”,⁶ need not necessarily imply a violation of legally guaranteed human rights, but that “[e]ven perfectly realized human rights are compatible with radical inequality” (see Moyn 2015). Jason Hickel argues against this view and highlights that Article 25 of the *Universal Declaration of Human Rights* in particular guarantees the equality of living standards, health and well-being, and that one could therefore say: “[...] Article 25 technically requires redistributing a portion of national or global income.” (Hickel 2020: 416). The author insists that the issue of redistribution cannot be ignored, particularly against the backdrop of an ‘ecological overshoot’.

If Marx were to participate in this discussion, he would not be ever so concerned with a somewhat modified or supposedly more just distribution within capitalism, but rather would offer a more fundamental critique. That is, he would emphasise the contradiction between the creation of value made possible by the social forces of production and the largely private appropriation of this value. In that vein, Marx and Engels polemicised extensively against notions of being able to change the system via tax policies: relations of distribution, “which rest directly upon bourgeois production, the relations between wages and profit, profit and interest, rent and profit, may at most be modified in inessentials by taxation, but the latter can never threaten their foundations. All investigations and discussions about taxation presuppose the everlasting continuance of these bourgeois rela-

freed-up sum of around \$5.7 million could be used, say, to fund education, health or the ecological transition towards a zero-carbon economy (from which all would benefit: the unskilled, however, would do so to a far greater extent than the CEO with a now-moderate income).

6 This would correspond to a Gini coefficient of 1. The scale of the Gini coefficient (or index) ranges from 0 to 1 and is one of the commonly used statistical measurements for inequality (in terms of income or wealth distribution). Both in the past and today, Germany's Gini index has been relatively high, at 0.78. In the dataset used (the German Socio-Economic Panel, or SOEP), however, the crucial group of millionaires, or HNWI ('high net worth individuals'), were underrepresented; the German Institute for Economic Research (DIW) has closed this gap through a special survey (SOEP-P) and an addendum to the dataset in the form of a list of the 700 wealthiest people in Germany, based on *Manager Magazin* (see Schröder et al. 2020). This calculates a Gini index of 0.83 after adding the two supplementary datasets to the equation. Prior to that, it had been assumed that the richest one per cent of the population owned around 23 per cent of total wealth, but the revised calculation produced an even higher figure of 35 per cent; given the more accurate database, the figure for total wealth owned by the richest ten per cent changed from 59 to 67 per cent and that for the richest 0.1 per cent was even corrected from 7 to 20 per cent (ibid.: 319). According to these figures, wealth is distributed significantly more unequally in Germany than income or consumption capacity (ibid.: 320).

tions.” (Marx/Engels 1978: 331)⁷ One cannot help but feel strangely reminded of today’s debates by this remark, and even more so when Marx and Engels continue: “Taxation may benefit some classes and oppress others harshly, as we observe, for example, under the rule of the financial aristocracy. It is ruinous only for those intermediate sections of society between the bourgeoisie and the proletariat, whose position does not allow them to shift the burden of taxation to another class.” (ibid)

This shows that Marx refers to matters of distribution and allocation of resources when using the term relations of distribution, which he considers to be a mere phenomenon and reflection of the relations of production. The terms ‘relations of distribution’ and ‘distributive forces’ must therefore be clearly distinguished from one another. Firstly, despite—or precisely because—of the former’s terminological proximity to the term ‘distributive forces’ elaborated here, and, secondly, because the relations of distribution (i.e. ultimately, the relations of production) represent an underlying cause of the very imbalance between consuming power and (over-)produced values. And, not least, because the distributive forces have in turn assumed an independent and more important position among the productive forces (see Chapter 5.1). In other words, this proximity is not only terminological, but concerns the substance of the matter, too.

One legitimate objection which Marx readers could be expected to raise with regard to the term ‘distributive forces’ would be: essentially, it is all just circulation. This is correct (and it is no coincidence that I address circulation costs in the context of the development of the three distributive forces in Chapter 6.1). And yet, this fails to capture what the term ‘distributive forces’ seeks to bring to light analytically. To understand the difference (and, simultaneously, the close relationship), we may once again draw on Marx. He distinguishes between two forms of circulation costs: firstly, those accruing from “circulation as an economic act—as a relation of production” (Marx 1986: 447) and, secondly, those which are ‘directly a moment of production’, including, say, means of transport and communication. In his investigation, he is mainly concerned with the former. For him, the analytical appeal emerges from considering circulation as a ‘a process of transformation, a qualitative process of value, as it appears in the different forms of money, pro-

7 Decades earlier, Friedrich Engels also directed his more combative tones against the left-wing poetry and prose of this day—the verses and lyrics of which, he lamented, were not aimed at changing the relations of production, but only at mitigating poverty: “The most common kind of socialist self-complacent reflection is to say that all would be well if only it were not for the poor on the other side. This argument may be developed with any conceivable subject-matter. At the heart of this argument lies the philanthropic petty-bourgeois hypocrisy which is perfectly happy with the *positive* aspects of existing society and laments only that the *negative* aspect of poverty exists alongside them, inseparably bound up with present society, and only wishes that this society may continue to exist *without the conditions of its existence*.” (Engels 1976: 246)

duction process, product, reconversion into money and surplus capital' (ibid). At the same time, the costs of circulation could indeed be zero, too (see ibid.). In my analysis of the distributive forces, I am mainly concerned with a dimension that is linked to both forms of circulation costs, but which only becomes discernible in advanced capitalism—yet which Marx nonetheless already identifies:

"However, in so far as circulation itself involves costs, requires surplus labour, it appears as itself included in the process of production. In this respect circulation appears as a moment of the direct production process. In the case of production directed towards immediate use, and exchanging only the surplus, the costs of circulation are incurred only in relation to that surplus, not to the main product. The more production comes to be based on exchange value, and thus on exchange, the more important for production do the physical conditions of exchange become—the means of communication and transport." (Marx 1986: 448)

In the earlier stages of capitalism, the circulation costs that Marx mentions would have to be added—i.e. spending on the transport and communication that are physically required to get the goods to the market so as to realise the produced value. Today, however, we have long since entered a stage of capitalism in which production is not only still and primarily geared towards exchange value, but in which the logic of circulation has a very physical rebound effect on production. On the one hand, all production processes are permanently optimised in pursuit of the greatest possible generation of surplus value. On the other hand, more and more activities are taking place within and between business enterprises that are primarily or exclusively related to circulation:

- *Circulation within a business enterprise.* Part of the efforts towards market realisation must already be prepared, organised and integrated in the manufacturing enterprise's production-related processes. The smooth transfer of the produced good to its point of sale on a market is becoming increasingly complex and costly. Just like the production processes themselves, it is becoming the object of ever-more perfect optimisation and, increasingly, the decisive factor for restructuring production processes.
- *Circulation as a business enterprise.* Efforts towards market realisation are increasingly rendered by other companies rather than by manufacturing enterprises themselves. These companies specialising in circulation generate a surplus value of their own which they seek to increase through the permanent optimisation of their processes, while also having to realise them on the market. This in turn incurs circulation requirements and costs that are accompanied by the familiar economic logics of overproduction and market expansion.

Of course, the aim of all these activities and processes is successful commercial circulation as well. At the same time, more and more real physical efforts based on human labour are required to attain just that. Therefore, they are doubtless part of the productive forces. Yet, they are no longer only secondary or auxiliary productive forces, but rather assume a status in their own right.

This increase in significance can be ascertained in both quantitative terms (costs, workforce, businesses) and qualitative ones (values, work, strategies) and leads to independent technical and organisational optimisation and a specific differentiation and division of labour. After all, in economic terms, this real, physical, labour-based aspect of circulation operates the same way as actual production: new value is created only when living human labour is involved. The use value of a market introduction, however, essentially emerges from economic necessity:

“Circulation can create value only in so far as it requires additional employment—of alien labour—additional to that directly consumed in the production process. This is then the same as if more necessary labour were directly required in the production process. Only the real costs of circulation increase the value of the product, but they reduce surplus value. [...] In so far as circulation costs in general, i.e. the production costs of circulation, concern the exclusively economic moments, circulation in the strict sense (bringing the product to the market gives it new use value), they have to be regarded as deductions from surplus value, i.e. as an increase of necessary labour relative to surplus labour.” (Marx 1986: 471–472)

Because circulation *within* an enterprise and circulation *as* an enterprise are closely interrelated, capitalism can no longer be understood today only considering the productive forces linked to production. Rather, this understanding increasingly requires a grasp of this other side (of the same coin) that I term the distributive forces.

These latter represent the real expression of increased circulation activities, but cannot be equated with circulation as an economic process. *That is the analytical reasoning underlying this choice of terminology.* In business economics, and therefore in daily business practice, the term ‘distribution’ is commonly (and, in my view, quite accurately) used to denote all processes that “take place between producers and retailers all the way to the end customer (or directly between producers and end consumers).” (Kenning 2020, translation amended). *And that is the pragmatic reasoning underlying this choice of terminology.*

7.2 Transformation or casting off the skin: the disruption of the productive forces?

As we have seen, many analyses of the current, allegedly more digital capitalism (see Chapter 2) focus on the question of whether we are dealing with something fundamentally new and whether the proclamation of a novel kind of *-capitalism is justified. Proceeding from the diagnoses concerning early and industrial capitalism (Chapter 4) that underlie this book, we could raise the question of whether we are witnessing a second *Great Transformation* in the sense of Karl Polanyi and/or a leap in the productive forces as described by Karl Marx.⁸

From my deliberations thus far on the new prominence of the distributive forces—as well as from the fact that I am referring to them by a special term complete with its own dimensions (see Chapters 5 and 6)—one might conclude that, through this diagnosis of distributive-force capitalism, I am also striving to proclaim an entirely new form or variety of capitalism. It may thus appear that I am one of those authors competing for interpretive sovereignty through their analyses (though in most cases this is not even their intention, but mostly a mere ascription found in reviews and engendered by their publisher's marketing efforts). But this is far from the case. My concern is *not a new capitalism*, but rather certain dynamics that have become more significant *within* capitalism. The starting question was not: what does digitalisation turn capitalism into? But rather: which mechanisms of capitalism are becoming more pronounced, which of them are changing and shifting—and what role does digitalisation have in all this? That is to say, I am interested in what is actually transformative, i.e. causing transformation. So, to paraphrase Polanyi, I would not proclaim a second, but a *Greater Transformation*. To put it with Marx, then, I see no disruption of productive power, or of the productive forces, but transformative changes among the productive forces which justify considering the distributive forces as an analytically separate category. And yes, I do indeed believe that digitalisation plays a vital role in this. In my view, however, this latter is not some exogeneous driver of novel economic dynamics. It is, simply, very convenient to use as a distributive force and therefore employed particularly in the context of those economic dynamics that are

8 In texts that reference Marx, the term 'transformation' is rarely ever used, as compared to 'transformation problem'. However, the term then appears with strongly differing connotations in various disciplines: in the sociology of work, it mainly addresses the problem (of the entrepreneur) of having to ensure that the purchased labour power actually performs specific labour (see Minssen 2012)—be it via control and incentive, subjectivation or, as would be common today, through indirect control, nudging and gamification. Economics distinguishes between the concept of quantitative and that of qualitative transformation (with the former pertaining only to price relations, and the latter referring to the substantial difference between the value and the price of a commodity) (Fine/Harris 1979: 21–33).

dominant in an aged, compulsorily overproducing and crisis-ridden capitalism. So, my main concern here is not a replacement, phasing out or supersession of capitalism, but a change within it. This means not decay and a fresh start, nor a complete metamorphosis, but a merely outward—albeit comprehensive—change in its shape, based on its underlying substance.

In nature, metamorphoses are only known to occur in insects, who undergo a change in form during their development. The butterfly, for example, experiences a ‘complete metamorphosis’, as zoology refers to it: what emerges—from egg to larva to pupa to the adult animal—is a new, essentially different animal that largely digests its prestages during the transformation process (see Eggert et al. 2010: 414–416). It is therefore no surprise that the colloquial metaphor, ‘from a caterpillar into a butterfly’, has been applied time and again to describe the emergence of capitalism:

For instance, Edward Baines Jr. (1835), whose history of cotton manufacture was already used as a reference by Karl Marx—in the *Outlines of the Critique of Political Economy* (Marx 1987: 205)—and Friedrich Engels—in his empirical study of the *Condition of the Working Class in England* (Engels 1975: 429)—compares the processing of products through technology, namely by means of mechanics and steam, to the caterpillar-butterfly metamorphosis: “By this means, manufactures of every kind have undergone a transformation scarcely less important than that which takes place in the caterpillar, when it is changed from a creeping into a winged insect” (quoted in Wengenroth 2015: 71). Polanyi also describes the transformation of the previous economic form into capitalism to be as complete as the metamorphosis of a caterpillar into a butterfly: “The transformation to this system from the earlier economy is so complete that it resembles more the metamorphosis of the caterpillar than any alteration that can be expressed in terms of continuous growth and development.” (2001: 63) And, finally, Karl Marx uses the metamorphosis metaphor in the context of the *circulation of capital* and the time this takes: “[...] the nature of capital presupposes that it passes through the various phases of circulation, not indeed as in the imagination, where one concept can turn into another with the speed of thought, IN NO TIME, but rather as real situations which are separated from one another in time. It must spend some time as a chrysalis before it can take wing as a butterfly.” (Marx 1986: 472; capitalisation in the original) This realisation appears particularly compatible with our consideration of digitalisation in terms of a distributive force, seeing as it is increasingly being used to shorten time and to constantly approach, as far as possible, the state of ‘no time’ (or ‘real-time’, according to the wording which is commonly but mostly incorrectly used today).

Although Baines focuses primarily on technology, he also considers the period in which industrial capitalism emerged. When Karl Polanyi addresses the emergence of capitalism, his concern is similarly fundamental as that of Marx when

dealing with the change from money into commodity (purchase on the commodity or labour market), from commodity into surplus value (during the production process) and from commodity (including added value) into more money. The crucial point is the emergence of something fundamentally new. The butterfly metaphor is thus plausible in each of these cases. But it would be inaccurate to apply it to today. Capitalism is not being replaced. So far, it is not digesting itself (at least not ostensibly so), but everything else. Even if the talk of neo-feudalism⁹ appears to suggest just that: it is still capitalism. Digitalisation does not change this. And yet, there are sufficient novel aspects to necessitate analytical precision and distinction, as I propose here by using the term 'distributive forces'. Here, again, zoology offers a suitable metaphor: instead of the caterpillar's complete metamorphosis into a butterfly, this would rather correspond to the incomplete metamorphosis (hemimetaboly) of the locust, which develops from the nymph to adult animal by repeatedly casting off its skin, throughout the stages of which it hardly changes its actual physical shape (except for its size and the development of reproductive organs and wings).

9 The term 'feudalism' is currently enjoying a resurgent popularity, with the large tech and platform corporations from Silicon Valley being critically considered as actors in this context. In Unicorn Feudalism (Gavet 2020: 35–42), for example, the structures within these companies and their value chains are compared to the seven strata of the feudal social pyramid (from the king at the top to the peasants, serfs and soldiers at the bottom): at the top of the tech corporations' hierarchical pyramid, according to Gavet, are the Founder CEOs, while the bottom level is occupied by independent contractors, users, and second- and third-tier service providers (see *ibid.*: 38). Geographer Joel Kotkin (2020) considers the middle classes to be threatened by a neofeudalism, which though it may be marketed much better than its historic predecessor, will lead us into the 'high-tech middle age' (see *ibid.*: 27). At the same time, this appears not to be all that new, particularly when he notes that today's tech corporations have a similarly oligopolistic power as the moguls of industrial capitalism John Rockefeller, Andrew Carnegie or Cornelius Vanderbilt (see *ibid.*: 31). In fact, we can today find many other diagnoses of society which make such a comparison with feudalism: a theoretician of punk and anarchism proclaims the advent of Techno-Capitalist-Feudalism (Bellemare 2020), whereas a sociologist and an astrophysicist (Moreno/Jimenez 2018) predict a future of Robotized democracies (further underlined by the fact that the English version of the original Spanish book was entirely translated by web-based translation engine DeepL; only ten per cent of the text containing 'obvious nonsensical sentences' was edited by the authors; see *ibid.*, copyright note without pagination), which, so the authors claim, in the US is drifting into a neo feudalism, while Europe and its unconditional basic income (UBI) may still be able to rescue democracy. Even before that, two Australian researchers—focusing on social inequality and power asymmetries with regard to intellectual property in the field of medicine and the pharmaceutical industry—speak of Information Feudalism (Drahos/Braithwaite 2002). Nor do America's Fifteen Steps to Corporate Feudalism as described by former political consultant Dennis Marker (2012) refer to Silicon Valley actors specifically—this reads much more like a neoliberal agenda (from media manipulation via the weakening of trade unions to the privatisation of public tasks).

As with every comparison, this one does not hold together entirely. On the one hand, it is more accurate than the caterpillar-butterfly metaphor, for here we are no longer talking about something entirely distinct developing into capitalism. Instead, it is capitalism itself that is developing. It is, so to speak, becoming an adult and developing wings. To keep with this image, these wings would represent our distributive forces. They already existed as a physical disposition, and now they are attaining full maturity—and digitalisation and the actors of the digital economy are surely helpful in this (which explains their economic success). Nor are we dealing with the replacement of the productive forces by the distributive forces. The distributive forces, of course, do remain part of the more general concept of the productive forces. The capitalist logic remains untouched. And yet, there are changes taking place at the phenomenal level, which entail considerable consequences. And this is where the applicability of this metaphor ends. For neither the complete metamorphosis of the individual butterfly nor the incomplete one of the individual locust have any severe or even catastrophic impact on their respective habitat (even if it is granted that locust swarms certainly can do so). We can describe this process of the constantly increasing significance of the distributive forces over time in several rough stages (or: sheddings of the skin):

Initially, from the era of industrialisation onward, capitalism developed its driving force out of the optimisation of the productive forces. Each business enterprise attained (or not) the crucial technological advance and/or devised organisational processes to improve their productive forces. Some of them assumed a monopoly position during the early days of capitalism. Over time, it was those national economies benefiting the most that offered a corresponding institutional setting for developing and optimising the productive forces, first at the individual company level and, eventually, on a comprehensive economic and social scale. This included, for example, an adequate education system; an enabling infrastructure, publicly paid for from the outset, at least in part, and partly initially run by private, monopolist-like actors, but regulated by law; measures towards institutionalised and regulated procedures in cases of conflicts between capital and labour (industrial relations). The underlying motive for all this was value generation and an increase in the share of surplus value. The need to find, or somehow generate markets matching the produced goods (by increasing purchasing power, reducing production costs or engaging in war) was already and increasingly important. But it was not as crucial for surviving in the competition as the innovation capacity in the context of value generation and the productive forces that focus on just this. As a result of the differentiation of the productive forces, the global division of labour also expanded, leading to more and more efforts and costs necessitated by transport between and warehousing at the manufacturing units of the value chains and ever-more marketing locations.

Besides this, measures related to value realisation also emerged early on. By and by, the productive forces aimed at real distribution and commercial circulation were becoming more professionalised and differentiated. One aspect adding to value generation and corresponding efforts towards optimisation was the circumstance that value realisation on the market itself increasingly required human labour.

Advertising, marketing and accounting became professions in their own right, while new functions and operational tasks arose that were primarily geared towards value realisation. Peter Drucker's diagnosis of the knowledge society¹⁰ or Daniel Bell's rather similar one of a post-industrial service society (see 1999) could also be read in the following sense: that there are more and more efforts, business models and activities aimed at safeguarding, as far as possible, value realisation—which is why the significance of management knowledge (Drucker) or service work (Bell) is increasing.

Activities related to securing market access, tariffs, trade agreements and politically initiated trade-boosting measures were increasing. Value realisation was increasingly becoming the new target dimension of political action. This was

10 As early as the 1960s Peter F. Drucker addresses knowledge, as a core economic competence, and the concept of knowledge work (see 1969). From this same perspective, during the 1980s he developed the idea of 'knowledge-based innovation' as the source of an 'entrepreneurial society', which he already then linked to information technologies (see 2015: 316) and would later be among the first to consider in relation to the Internet and eCommerce (see 1999). Knowledge society, he would go on to explain, is the most competitive society of all time and would lead to new class conflicts: "A society in which knowledge workers dominate is under threat from a new class conflict: between the large minority of knowledge workers and the majority of people, who will make their living traditionally, either by manual work, whether skilled or unskilled, or by work in services, whether skilled or unskilled" (1994: 64). Considering that Drucker regards Marx, alongside Hegel, as a "terrible simplifier" (1993: 60), he spends a surprising amount of time engaging with Marx's terminology as he defends his own idea of the knowledge society. However, Drucker concedes, it would have been too early at the time to go ahead and publish a book titled *The Knowledge* (ibid.: 71) in allusion to Marx's *Das Kapital*. In the same article, he pointedly summarises his core thesis concerning the 'knowledge society': knowledge that used to be applied in the technological realm and for the purpose of productivity increases has for decades been applied to management, indeed ever since Frederick W. Taylor (ibid.: 60). Knowledge enabled first the Industrial Revolution and then the productivity revolution (the latter of which Drucker dates between 1880 and World War II, expressed among other things by the emergence of the middle classes; ibid.: 53). Ever since, he notes having observed: "Knowledge is applied to knowledge itself", setting in motion a management revolution (ibid., emphasis in the original). Yet, the actual cause of this renewed revolution (why does it become necessary to apply knowledge 'to knowledge itself?'), remains largely in the dark, or rather appears at times to be both the consequence and the precondition of digital technology. Drucker doubtless describes these phenomena accurately (except, perhaps, for his misapprehension of the class concept), but their root cause is not satisfactorily developed analytically.

present from early on, and could even assume imperialist forms (access to new markets through violent means) or find expression in free trade agreements. Even VAT¹¹ had long been configured by many countries in such a way that this tax only became applicable in the very last step of value realisation on the market (i.e. in the private purchasing act), frequently contributing the largest share of tax revenues, even greater than income tax.

All this persisted and evolved, was reinforced together with the respective intrinsic logics, branched out and became more and more contradictory. Yet this does not imply the emergence of a new stage, simply because digitalisation now enters into the equation of value generation and value realisation. We may only speak of a new stage if the distributive forces are no longer a mere auxiliary and catalyst of the productive realm, but themselves become strategically vital.

- “Strategically vital” is to say, *firstly*, if the ability to permanently optimise the productive forces geared towards value generation represents the entry ticket for businesses and national economies to even be able to keep up with the global competition.
- If, *secondly*, the capacity for the broadest possible and constantly optimised use and refinement of the productive forces geared towards value realisation (i.e.: the distributive forces) becomes the decisive precondition for global success as a business enterprise or national economy.
- *Thirdly*, if more and more (not only) manufacturing enterprises approach the processes of value generation (from inventions and innovations to the technical and organisational specifications of work processes, from strategy to operational implementation) mainly from the perspective of value realisation and organise them accordingly.
- If, *fourthly*, more and more enterprises emerge whose own value generation is built on the sale of means of distribution and distributive-force optimisations to other businesses as a product or service.
- And, *fifthly*, if all this has an impact not only on company structures, but also on industrial and professional structures more generally, as well as in the

11 Germany today has (and this was not always the case) what is called a ‘net all-phase sales tax with input tax deduction’ (Allphasen-Netto-Umsatzsteuer mit Vorsteuerabzug): unlike in the case of the ‘gross receipts tax’ (Allphasen-Brutto-Umsatzsteuer), the pre-tax deduction exempts the product, throughout its entire production process across all stages of the value chain, from sales tax, which accrues exclusively as VAT in the (private) act of purchase (see Naujoks 2014). In other words: what is subject to tax is value realisation, not value generation—yet not for those who profit from successful value realisation, but for those who make it possible. In 2019, VAT represented the largest item among the combined Federal and Länder taxes (Gemeinschaftssteuern) in Germany, accounting for a greater share than income tax (see BMF 2020: 57).

corresponding vocational training systems, while also being reflected in consumption practices and the social significance of consumption.

We may note: over the course of capitalism's development, businesses and national economies have had an edge over the competition whenever they have had a special aptitude in connection to the most dominant aspect of the given stage. In this, the qualification of labour forces and infrastructure always constitute the essential link between individual enterprises and politics. The less need that companies have (or think they have) for either, the more vocal their calls for less government intrusion. However, the relevant innovations, both then and now, were and are at the level of infrastructure: the railway and the Internet are more important strategically and for the national economy than the steam engine or the computer. The latter become freely available (albeit not cost-free) means of production (indeed, ones that would have been utterly inconceivable in early industrial capitalism), whereas infrastructure was and remains key (see Chapters 2.1 and 2.3).

By now, it ought to be clear: the subject matter we are dealing with here is generally *not the replacement* of 'old' by 'new' capitalism. Productive-force capitalism never dies, but simply moves on geographically (often undergoing technical and organisational regresses in the process). The productive forces and the means of production are no longer the exclusive determining factors of economic success (neither at the level of the individual company nor at that of the national economy), and yet, they remain the material base of the current and any subsequent stage of 'distributive-force capitalism'. So, the shedding of the skin is not as complete as the caterpillar's transformation into a butterfly, but rather, incomplete and gradual as in the case of the locust. Each new shedding, each new stage—with its own technical and organisational methods—also always pervades its respective preceding stage. This applies to the industrialisation of agriculture as much as to the digitalisation of production through Industry 4.0. In the process, there may actually be setbacks in productivity during these pre-stages. What remains crucial is whether the integration of the new elements into the logic of valorisation is successful. In this sense, there generally applies, here, too, what is referred to in the context of institutional change as *layering* (see Dolata 2011): that is, a radical change that takes the form of a gradual transformation—in which new elements come to the fore, become increasingly significant, while established structures and institutions are not fundamentally called into question but altered through amendments and extensions adding to and combining with the new elements (see *ibid.*: 14). The analogy has its limitations, however: while new institutional arrangements may at one point fully replace other and older arrangements, the distributive forces—notwithstanding their increased and further increasing significance—will always depend on their base, the productive forces. It would be impossible for the one to replace the other.

Those who accuse Marx of a deterministic and mechanical notion of change or social dynamics may have read a great deal *about* him, but most likely very little *by* him. What makes his analyses so compelling—and so inspiring to this day—is precisely the fact that he does *not* reduce the complexity of society and history to simplistic causalities or, so to speak, to a hard-wired sequence of steps. However, matters do not dissolve into randomness or redundancy for Marx, either. To begin with, he conceives of society as proceeding from the social acts of individuals: “What is society, irrespective of its form? The product of man’s interaction upon man.” (Marx 1982: 96) That is to say, Marx takes as a starting point social actions at the micro-level, i.e. the very origin of the social, and considers the structures in which actions take place—actions which are anything but random:

“Is man free to choose this or that form of society? By no means. If you assume a given state of development of man’s productive faculties [*Produktivkräfte*], you will have a corresponding form of commerce and consumption. If you assume given stages of development in production, commerce or consumption, you will have a corresponding form of social constitution, a corresponding organisation, whether of the family, of the estates or of the classes—in a word, a corresponding civil society. If you assume this or that civil society, you will have this or that political system, which is but the official expression of civil society.” (Marx 1982: 96)

If we forget that Marx’s starting point is social (inter)action, we could indeed read this as a kind of deterministic sequence of stages. But that is not his intention. When he answers in the negative to his opening question of whether people are free to choose a form of society, this does not mean that social forms are not determined by people, but that they cannot be created independently of the specific conditions given. In modernity, historical development is considered in a somewhat similar way. Ultimately, we could interpret the entire current discourse on digitalisation as follows: conditions are changing as a result of digitalisation, and it is therefore plausible to contemplate new forms of society. Yet Marx is far more dynamic in his thinking than that, and would never settle for assuming that ‘Industry 4.0’ alone is creating a new form of society. This is illustrated by his typically sardonic and critical remarks with regard to the book *The Philosophy of Poverty* by Pierre-Joseph Proudhon,¹² which had just been published at the time. In a letter to the publisher Pavel Annenkov, Marx emphasises that not only do “men manufacture worsted, linens and silks”, but “according to their faculties, men also produce the *social relations* in which they produce worsted and linens” and “those

12 Translator’s note: The title of the book has also been translated as *The Philosophy of Misery* [orig: *Misère de la philosophie*], yet it is often rendered as above because of Marx’s now more famous reply *The Poverty of Philosophy*.

who produce social relations in conformity with their material productivity [*Produktivkräfte*] also produce the *ideas, categories*, i.e. the ideal abstract expressions of those same social relations" (Marx 1982: 102).¹³

While the constant revolutionising of the productive forces ever since the Great Transformation has demanded that societies prove a lasting capacity for adjustment (and for coping with the collateral damage of the commercial revolution), the distributive forces turn the Great Transformation into a *Greater* one (not because the latter is quantitative 'greater' in scope than the former, but because it is linking up and combining with the still ongoing Great Transformation and driving it forward). Over the course of globalisation and informatisation, the development of the distributive forces began to assume initial, tentatively society-transforming forms during the early 1980s, even though they still appeared largely limited to the economic sphere. Particularly important in the early stages of this process were measures

- towards organising the logistical distribution of material goods at such a low cost that low wages in other countries would keep end prices low, in turn enabling stagnating real wages in other regions (without the declining purchasing power there increasingly endangering surplus value realisation);
- towards organising the logistical distribution of material goods at such a low cost and high speed that customisable and configurable (albeit not yet fully personalised) individual purchases would be made possible and surplus value realisation would no longer, or at least to an (increasingly) lesser extent, rely on institutionalised and multi-layered supply chains.

In the 1990s, these processes were then further perfected, and informatisation increasingly stepped out of the high-tech niche and onto the labour market as well as entering production and logistics processes. This was the decade in which the Internet was opened up for commercial use, although it took until the turn of the millennium to develop a broader and more efficacious dynamic, after which its use became more widespread in the New Economy of the early 2000s—already at

13 In his riposte to Proudhon, *The Poverty of Philosophy*, this passage appears in almost identical form (albeit with a slightly varying English translation): "[M]en make cloth, linen or silk materials in definite relations of production [and] that these definite social relations are just as much produced by men as linen, flax, etc. Social relations are closely bound up with productive forces. In acquiring new productive forces men change their mode of production; and in changing their mode of production, in changing the way of earning their living, they change all their social relations." (Marx 1976a: 165) but without the sardonic asides about Ricardo which the letter contains, such as when Marx awards "whatever credit is due for understanding such a trifle!" (Marx 1982: 102)

that time linked to discursive hype. The dominant phenomena of this stage in the development of the distributive forces included, for example:

- securing a lasting and repeated value-realising distribution of (abstract-)material goods via technological path dependencies or long-term license models;
- the establishment of the first digital distribution platforms (especially Amazon), connecting sellers and buyers from all over the world independent of place or time;
- the systematic reduction of the costs of value realisation tied to offline resources (shop spaces, sales staff etc.) through online commerce;
- the database-based use of consumers' previous buying behaviour for targeted (personal) advertising.

During the 2000s, the opportunities offered by technology were increasingly seized and applied systematically in the service of value realisation, and the transformative force of the development of the distributive forces became more visible and efficacious outside the actual market (i.e. throughout society). This included, in particular:

- the conversion of forms of value realisation based on the sale of ownership to ones based on long-term use without ownership (streaming services, Software as a Service etc.);¹⁴
- the development of online platforms as distribution infrastructure, which not only infinitely increase the opportunity structures for global businesses but simultaneously secure value realisation in the long term for just a few central actors via their proprietary technology and/or their monopoly-like prevalence, driven by venture capital.
- the social media-based stimulation of consumer needs and manipulation of buying behaviour (via influencing, viral marketing etc.);
- the securing of sales in advance via Open Innovation or Crowdfunding.

Since 2015, autonomous technologies (Artificial Intelligence and Machine Learning) have been reinforcing these trends, complemented by calls from the industry—directed at the general public—to acquire digitalisation-adequate equipment

14 Such business models, which favour long-term paid use over the one-time sale (or rather, purchase), are often discussed only with regard to purely digital artefacts (e-books, software apps, music and video streaming or online gaming etc). But these models can increasingly be transferred to material artefacts via the Internet of Things (IoT), too—from managed services in plant construction to the software-based reduction of end devices' charge cycles or the prevention of repairs by non-authorized actors.

and—directed at politics—to provide the necessary infrastructure (broadband, 5G) and abolish laws and regulations that impede the further development of the distributive forces. Particularly relevant in this context are:

- the Machine Learning-based use of data pertaining to (individual and collective) buying behaviour in order to predict as accurately as possible which product or service should be offered to whom at what time;
- the conversion of individual behaviour-related data into commodities and providers' targeted, algorithm-based advertising and personalised appeal to customers (e.g. Psychographics);
- the alteration of the act of value realisation itself by stylising it as an event or through its imperceptible, 'smooth' integration into everyday behaviour (the now-abandoned Dash buttons, language assistants such as Alexa);
- the pursuit of digital control of all processes related to value creation and value realisation via blockchain technology;
- The use of AI for situational and individually targeted dynamic pricing.

Despite this development towards more and more varied distributive forces, the productive forces also exist in a new digital form. The strategy of continuing to harness technological development for the optimisation of production—that is, in the effort to produce more and more products at an ever-faster pace and at ever-lower costs, while generating a maximum surplus value—may be as old as capitalism itself, but it is far from outdated. The protagonists of the distributive forces and the experts of surplus value realisation have perfected old concepts for maximising surplus value. Correspondingly, a venture capital manager (turned critic) notes that the corporations in Silicon Valley know not only how to achieve “a Lot More Revenue with a Lot Fewer People”—from the systematic self-employment of the Uber driver to the Foxconn worker making a mere \$1.42 an hour (Gavet 2020: 39–42), a strategy that constitutes the core feature in the tech giants' disruption of other business sector: “But to compete, tech early on identified the cost of labor as among the biggest inefficiencies of its targets.” (ibid.: 35)—yet they also, as we will see further on, use digitalisation to rid themselves of the burden of owning actual means of production. What used to be regarded as the capitalist's indispensable asset in the past is today avoided as far as possible by parts of the platform economy (see also Chapter 8.1). This already shows us that, as worthwhile as it may be analytically to separate the distributive from the productive forces, in theoretical terms they must be conceived as one, and empirically they are only ever found in close inter-relation. This has implications for a definition, while also informing the development of research questions.

7.3 The development of productive and distributive forces—conceived as one

Business and scholars often equate the terms ‘productive forces (or power)’ and ‘development of the productive forces’ (see Chapter 4.3) with technological possibilities. They are thus used synonymously with the somewhat outdated term ‘techno-scientific progress’. Those who do not speak of technical or technological progress, but rather of productive power or the productive forces, or the development of the productive forces, usually also want to signal above all that their analysis is more profound, more critical and Marxist (even though this promise is not always fulfilled). In Marx, however, this term is never reduced to technology—as the *Critical-Historical Dictionary of Marxism* concisely informs us. According to the definition we find in its pages, productive power [*Produktivkraft*] comprises three levels:

“1. The productivity (of social labour); 2. The productive capacities of a social formation [...] which include the totality of the labour forces and the means of production of a given country or epoch; 3. The system that connects the labour forces and the means of production and in which the relation between human beings and objects and natural forces is expressed.” The term, Lefebvre continues, thus refers to “(producing) human beings, the objects (most of which humans have produced and use for production) and the relations between humans and those objects that are reflected in technological knowledge or in knowledge per se, i.e. in science and technology.” (Lefebvre 1987: 1065; translation amended)

At first, this entry in the dictionary is quite generally phrased; it applies to antiquity as much as to early industrial capitalism, and would do justice to so-called actually existing socialism as to the global digital capitalism of our day. But to understand the latter, or render analytically visible what distinguishes it from its predecessor, we still need to dig a bit deeper.

To this end, let us imagine an economic order in which only that is produced for which an actual need is articulated. The vision of on-demand production in the context of Industry 4.0 could in fact make this possible, in an ecologically reasonable way. The car, the outdoor jacket—whatever the product, it would only be produced when someone really professed a need for it specifically and in a personalised way, according to their consumer preferences, i.e. when a Jane Public or Joe Citizen entered the corresponding specifications in the web-based configurator or interactive online order form. In such a scenario, not only would the production of these two items then be set in motion, but there would also be a certain degree of transport to be organised: firstly, between different companies and production locations (because the metal sheet must get from the steel plant to the car plant,

and because a certain garment has been ordered together with a certain zipper matching its colour) and, secondly, from the end producer to the proud buyer of a car or the enthusiast for the outdoors.

In a global economy with differentiated value chains, the management of such interlocking operations may nevertheless be highly complex and elaborate (and expensive). The more regional and small-scale the organisation of this economy, the more effort it would require. Furthermore, our imagined economic order would (hopefully), in order to save resources, constantly weigh the customisable diversity of variants against the limitation of selection options, and the sophisticated just-in-time supply of raw materials or components against warehousing. And all this would have to work with often contradictory indicators of complex eco-balances and, hopefully, be linked to the ambition to allow for a good work-life balance for all those working in this process. All this would be highly complex and inconceivable without a sophisticated state of digitalisation allowing for an adequate management of all these target dimensions.

But let us turn our mind to a more elementary, less complex level. In the context of production—in addition to it, and in very general terms—the distributive forces would encompass *all social, technical, operational and institutional processes, arrangements and measures through which (dispersed) production and consumption can be linked—temporally, functionally and geographically—in as resource-efficient and needs-based a way as possible.*

Leaving aside the fact that we would probably all struggle to articulate our own desires and real needs without the ‘help’ of advertising, there would be no need for any distributive activities other than these real tasks surrounding the actual production process. Of course, as the complexity of our economic order increased, the distributive tasks would also engender new activities and professions as well as the corresponding business enterprises specialising in partial sub-processes. And this would entail the corresponding training institutions or certification providers. According to the specific task, work object or work context, distinct practices and social relations would develop. Yet none of that would require any further or different analysis—despite digitalisation. The old dictionary entry from the 1980s, just like the Marx quotes dating back over a century before it, would represent adequate analytical tools as well.

Both the author of the dictionary entry and Karl Marx himself would rightfully object: wait a second! If you are talking about the productive forces, you also have to consider the concomitant relations of production, and when taking both into account you end up with the mode of production. Which bring us to our imagined economic order and capitalism. Of course, the sentence in italics above applies to capitalism as well. And yet, something is added that distinguishes capitalism from other economic systems: namely, production primarily occurs for the mar-

ket. This applies to early and late industrial capitalism as much as to present day capitalism, or, as it is so readily referred to these days, digital capitalism.

Let us return once again to the example of customised, on-demand production in an imagined economic order and apply it to capitalism. This is technologically feasible and indeed already exists, albeit only in certain niches. Above all, however, there are many car manufacturers and even more producers of garments and textiles. And they all produce as much as possible—not only more of the same, but in an ever-renewed diversity. This is the only way to make full use of the machines' capacity—the only way for investments and innovations to pay off faster.

Yet, because so many companies, as a whole, produce too much and too much of the same, one thing becomes increasingly difficult: the entire undertaking rests on those willing to consume and pay. This adds completely different levels of distributive efforts to the equation. Efforts (and costs) that are needed to this extent only under capitalism. These efforts and activities—geared towards all-determining distribution—are informed by the principles and requirements of this economic order: namely, the commodity must be sold, and its value (the composition of which is so particular, see Chapter 3.1) must be realised on the market. Otherwise, the ultimate goal of the undertaking—turning a profit—has been missed. We are all familiar with the facets of this distribution so typical of capitalism. Much of it pervades and determines our lives: advertising and market research, target group marketing or viral influencing, additional (intermediary) warehousing and (re-)routes into other markets (or from and to cheaper production locations) or even the disposal of goods in the absence of sales etc. (see Chapter 5). All this is distribution, too, but all of it can be explained primarily by the fact that production is not guided by (real and specifically articulated) needs, but also and primarily (at least in quantitative terms) by a targeted and anticipated maximum profit. And it is these distribution-related efforts that would not exist to this extent in our imagined non-capitalist economic formation (which, admittedly, does take a degree of imagination, given the obvious lack of real or potentially viable alternatives).

In present-day advanced capitalism, more and more such distribution-related activities are occurring, all in pursuit of one central aim: market success. In the context of production—in addition to it, and in very general terms—this would mean: *the distributive forces comprise all social, technical, operational and institutional processes, arrangements and measures intended to secure, as far as possible, risk-free maximum value realisation on the market.*

If we were to define distributive power (or the distributive forces) from this perspective, in analogy to the dictionary entry quoted above, this might read as follows (all changes and amendments compared to the original quote are in *italics*):

"1. The *distributivity* (of social labour); 2. The *distributive* capacities of a social formation [...] which include the totality of the labour forces and occupations) and the means of *distribution* of a given country or epoch; 3. The system that connects the labour forces and the means of *distribution* (and the latter, in turn, with the labour of *consumers*) and in which the relation between human beings and the *distributed* and *consumed* objects and natural forces is expressed'. The term, Lefebvre continues, thus refers to '(distributing) human beings, the *procedures* (with or through which they distribute or motivate other people to consume) and the relations between humans and those *processes of distribution/consumption* and the *distributed/consumed* objects that are reflected in technological knowledge or in knowledge per se, i.e. in science and technology as well as in *consumption practices*.'" (Lefebvre 1987: 1065; translation amended)

This could almost be broken down into a kind of research programme, as it would appear fairly easy to deduce operationalisable questions and link them to existing indicators, or indicators to be devised, and/or data to be collected.

For example, one economically intriguing question with regard to *distributivity* would be how much value (in relation to expenditure) is actually realised. And, more specifically, we could ask how many goods/services are 'transported' to the place/time of their consumption. Another interesting aspect would be the ratio between produced but un-realised values, or that between the consumption enabled by distribution and independently existing yet unsatisfied needs.

Likewise, we can conceive of verifiable target figures pertaining to the dimension of *the distributive capacities* of a social formation or national economy: how high is the proportion of labour forces and qualifications working in and geared towards distribution, and how high is that of activities related to distribution within other jobs and professions? What are the relative magnitudes of the means of distribution used for distribution and the means of production used in production? Or, similarly, the relative quantity or range of the means of distribution employed for distribution and successfully distributed goods? Eventually, the ratio between produced versus successfully distributed value could become the more general study focus.

At the third level, our investigative gaze ought to focus on the relation between the labour forces and the means of distribution used. For this purpose, comparisons between labour forces in commercial distribution, in real distribution and in production would be helpful, say, with a view to differences and similarities regarding income, skill levels and qualification, labour capacity, labour quality and so forth, though such a comparison would also have to take into account opinions and mindset. Also relevant would be the relationship between consumers and the means and objects of distribution as well as their practices and motives of consumption. And in those cases, in which individuals perform both roles simultane-

ously, the personal inner tensions and conflicts between their role as a consumer and as a distributor would merit interest. Here, intersecting with the subsequent level of analysis, the influence of the development of the distributive forces on the productive forces and the interplay of both would need consideration.

Regarding the institutional and structural level, further research questions would arise pertaining to the *relation between distribution capital and production capital*: for example, with a view to economic relations such as competition, capitalisation and market(-shaping) power, and industrial relations. Added to this are questions of social embedding such as political participation, the influence of lobbying, forms of legitimation and social status.

In analogy to the above, these questions could be expanded to include the relation between national economies that are more successful at distribution versus the ones that are more successful at production. The levels of the individual enterprise and of the national economy could then converge in research on forms of distributive and productive forces along global value chains.

